

The present invention can be used to develop new drugs to inhibit tumor cell metastasis, inflammation and autoimmunity. The identification of the *hpa* gene encoding for heparanase enzyme enables the production of a recombinant enzyme in heterologous expression systems. Additional features, advantages, uses and applications of the present invention in biological science and in diagnostic and therapeutic medicine are described hereinafter.

BRIEF DESCRIPTION OF THE DRAWINGS

The invention herein described, by way of example only, with reference to the accompanying drawings, wherein:

FIG. 1 presents nucleotide sequence and deduced amino acid sequence of *hpa* cDNA. A single nucleotide difference at position 799 (A to T) between the EST (Expressed Sequence Tag) and the PCR amplified cDNA (reverse transcribed RNA) and the resulting amino acid substitution (Tyr to Phe) are indicated above and below the substituted unit, respectively. Cysteine residues and the poly adenylation consensus sequence are underlined. The asterisk denotes the stop codon TGA.

FIG. 2 demonstrates degradation of soluble sulfate labeled HSPG substrate by lysates of High Five cells infected with pF*hpa2* virus. Lysates of High Five cells that were infected with pF*hpa2* virus (●) or control pF2 virus (□) were incubated (18 h, 37 °C) with sulfate labeled ECM-derived

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